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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,827	12/28/2001	Akihiro Wada	217818US0CONT	5540

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EXAMINER

KEYS, ROSALYND ANN

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,827

Applicant(s)

WADA ET AL.

Examiner

Rosalynd Keys

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-22 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-6 and 8-22 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-6 and 8-22 are pending.
Claims 1-6 and 14-22 are rejected.
Claim 7 is canceled.
Claims 8-13 are withdrawn from consideration.

Election/Restrictions

2. See previous office action, mailed August 6, 2003.
3. Claims 8-13 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 15-17, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ver Nooy III (US 3,022,356).

Ver Nooy III teaches preparing a fluoroalkanol having the claimed formula 1 by continuous addition of di-tert butyl peroxide along with methanol and continuous addition of tetrafluoroethylene (see example I and column 2, lines 12-31). In the example a temperature of 140°C is taught, however a temperature range of 50°C to 250°C may be utilized (see example I and column 2, lines 18 and 19). In the example a pressure of 630 psig

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is taught, however a pressure range of 1 to 100 atmospheres (0.1 to 10 MPa) may be utilized (see example I and column 2, line 18). The amount of methanol to tetrafluoroethylene may range from 1 to 10 moles of methanol per 1 mole of tetrafluoroethylene (see column 2, lines 16-17).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 14, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ver Nooy III (US 3,022,356) alone or in view of Joyce (US 2,559,628).

Ver Nooy III teaches the invention as disclosed above but fail to teach using isopropyl alcohol as the starting alcohol, as disclosed in claim 14.

Joyce teaches preparation of a compound having the claimed formula 1 comprising reacting a compound having the claimed formula 2 with a compound having the claimed formula 3 (see entire disclosure). In the process of Joyce methanol and isopropyl alcohol are taught to be interchangeable.

One having ordinary skill in the art at the time the invention was made would have found it obvious to substitute isopropyl alcohol for methanol in the process of Ver Nooy III, since Joyce teaches that the two are interchangeable as starting alcohols in a process for the preparation of fluoroalkanols from alkanols and tetrafluoroethylene.

Ver Nooy III differs from claim 18 in the order of addition of radical initiator. Ver Nooy III adds the radical initiator along with the methanol, whereas the Applicants add the radical initiator along with the tetrafluoroethylene.

However, It has been held that that the selection of any order of mixing ingredients is prima facie obvious (see *in re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930)).

Although, Ver Nooy III exemplifies the use of a pressure (630 psig = 4.3 MPa), which is outside the claimed range, Ver Nooy III do suggest the use of a pressure range that encompasses the claimed range.

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990); *In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997).

Ver Nooy III differs from claim 21 in that Ver Nooy III do not teach only adding a 15 to 30 % of the total amount of the radical initiator with one hour and then adding the remaining amount at a constant speed during the remaining time.

One having ordinary skill in the art at the time the invention was made would have found it obvious to vary the concentration of radical initiator present in the reactor for purposes of optimization. Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

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9. Claims 1-6, 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joyce (US 2,559,628).

Joyce teaches preparation of a compound having the claimed formula 1 comprising reacting a compound having the claimed formula 2 with a compound having the claimed formula 3 (see entire disclosure).

The process of Joyce differs from the instant process in that the process of Joyce is a batch process whereas the instant process is a continuous process. However, Joyce teaches that his process may also be carried out continuously or intermittently (see column 9, lines 6 and 7). Thus, there is a clear suggestion to carry out the process continuously. Further, the instant continuous process is unpatentable over the batch process of Joyce, since the court has held that a continuous operation would have been obvious in light of the batch process of the prior art. See *In re Dilnot*, 319 F.2d 188, 138 USPQ 248 (CCPA 1963).

Joyce further differs from claim 18 in the order of addition of radical initiator. However, It has been held that that the selection of any order of mixing ingredients is prima facie obvious (see *in re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930)).

Although, Joyce discloses the use of a broader pressure range than that disclosed in claim 20. The pressure range of Joyce encompasses the claimed range.

It has been held that in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. See *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990); *In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997).

Joyce differs from claim 21 in that Joyce does not teach only adding a 15 to 30 % of the total amount of the radical initiator with one hour and then adding the remaining amount at a constant speed during the remaining time.

One having ordinary skill in the art at the time the invention was made would have found it obvious to vary the concentration of radical initiator, when conducting the process of Joyce continuously, for purposes of optimization. Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Response to Amendment

Claim Rejections - 35 USC § 112

10. The rejection of claim 15 under 35 U.S.C. 112, first paragraph, is withdrawn due to the amendment to claim 15, filed January 6, 2005.

Response to Arguments


11. Applicant's arguments, see pages 7-12 of Applicants reply, filed January 6, 2005, with respect to the rejection of claims 1-6 and 14-21 under 35 U.S.C. 103(a) as being unpatentable over Joyce, Jr. (U.S. Patent No. 2,559,628) in view of Knaup (U.S. Patent No. 5,227,540) and further in view of Satokawa et al. (US 4,346,250) and the rejection of claims 1-6 and 14-21 under 35 U.S.C. 103(a) as being unpatentable over Knaup (U.S. Patent No. 5,227,540), have been fully considered and are persuasive. The rejection of claims 1-6 and 14-21 has been withdrawn.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosalyn Keys whose telephone number is 571-272-0639. The examiner can normally be reached on M and F 3:00-8:00 pm and T-TR 5:30-10:30 am.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rosalyn Keys
Primary Examiner
Art Unit 1621

March 28, 2005